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Reagents: (a) Boc-L-valine, BOP, TEA, THF; (b) TFA, CH₂Cl₂; (c) borane/dimethyl sulfide; (d) Boc-D-7-hydroxy-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF; (e) Boc-D-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF; (f) Boc-L-7-hydroxy-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF; (g) Lithium aluminum hydride, THF; (h) formalin, NaBH(OAc)₃, dichloroethane; (i) N,N-dimethylglycine, BOP, TEA, THF

Figure 3

Reagents: (a) Boc-L-valine, BOP, TEA, THF; (b) TFA, CH₂Cl₂; (c) borane/dimethyl sulfide; (d) Boc-D-7-hydroxy-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF